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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,986	03/11/2004	John F. Cooper	IL-11085	6284

7590 11/23/2007  
Eddie E. Scott  
Assistant Laboratory Counsel  
Lawrence Livermore National Laboratory  
P.O. Box 808, L-703  
Livermore, CA 94551

EXAMINER
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WRIGHT, PATRICIA KATHRYN

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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11/23/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/797,986	Applicant(s) COOPER, JOHN F.	
	Examiner P. Kathryn Wright	Art Unit 1797	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 September 2007.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-58 is/are pending in the application.  
     4a) Of the above claim(s) 1-55 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 56-58 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Priority*

1. Applicant's reply, filed September 18, 2007, to the previous Office Action is hereby acknowledged. Any objection/rejection not repeated herein has been withdrawn by the Office. Claims 1-55 are withdrawn. Claims 59 is now cancelled. Claims 1-58 are currently pending.

### *Election/Restrictions*

2. Amended claim 56-57 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Applicant elected without traverse **Group II (claims 56-59) and species c (including oxidizing elements or compounds such as chlorine, oxidative oxy-halogen compounds, found in claim 59)** in the reply filed on May 17, 2007. Claims 56-57 now contain species a-b and d-e of Group II.

3. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, **species a-b and d-e** in claim 56 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent no. 6,290,908 to Fukunaga et al., (hereinafter "Fukunaga") in view of Havlena (US Patent Pub. No. 2002/0189362).

Regarding claim 1, Fukunaga teaches a method of detecting oxidizing chemicals in a municipal water distribution system. Note that oxidizing chemicals in certain concentrations are considered contaminants. The methodology of Fukunaga includes sensing contaminants in water sample in the pipe. These contaminants include oxidizing chemicals (i.e., elemental chlorine) and/or biological contaminants, see col. 5, lines 28+. The system of Fukunaga teaches producing a signal based upon the sensing of contaminants in the water in the pipe and remotely transmitting the signal to a distant supervisory control and data acquisition system (water control center 3) via radio means, line transmission, satellite, etc. The supervisory control and data acquisition system receives the signal indicating contaminants in the water and controls the water purifying facilities accordingly (see col. 4, line 48- col. 5, lines 5).

Fukunaga does not specifically teach the signal being an acoustic signal communicated by water filled pipes which act as channels for transmitting the acoustic signal in the pipe, and a receiver that recovers the acoustic signal from the fluid.

Havlena teaches a system for monitoring water pressure with a transmitter that sends an acoustic signal into the water within the pipe. The water filled pipe acts a channel to transmit the acoustic signal. The acoustic signal is received in a corresponding receiver for recovering the acoustic signal. The use of acoustic wave propagation through the supplied fluid medium itself is advantageous in that it eliminates the additional costs of equipment, such as, external wires which are easily damaged (see par. [0001] of Havlena).

Accordingly, one of ordinary skill in the art at the time of the claimed invention would have found it obvious to use the acoustic transmitter/receiver arrangement in Havlena in fluid treatment system of Fukunaga since it eliminates the significant if not prohibitive cost of communication infrastructure (see par. [0001] and [0022] of Havlena).

### ***Response to Arguments***

6. Applicant's arguments filed September 18, 2007 have been fully considered but they are not persuasive. Applicant broadly asserts with respect to the rejection of claims 56-58 under 35 U.S.C. 103(a) as being unpatentable over Fukunaga in view of Havlena that all the claim limitations have not been met by the combined references Fukunaga and Havlena.

The Examiner respectfully disagrees. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which Applicant thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the

amendments avoid such references or objections. In the REMARKS/ARGUMENTS section of the above referenced reply, Applicant has merely recopied claim 56 and does not clearly point out the patentable novelty which Applicant thinks the amended claims present in view of the Fukunaga and Havlena references.

In response to applicant's statement that neither the Fukunaga or the Havlena reference recognizes the problem solved by Applicant's claimed invention (i.e., providing early warning of contamination of water in a municipal water distribution system by detecting contaminants introduced therein), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, obviousness has been established for combining or modifying the teachings of the applied prior art to produce the claimed invention since Havlena provides motivation to do so. That is, Havlena teaches the use of acoustic wave propagation through the supplied fluid

medium itself is advantageous in that it eliminates the additional costs of equipment, such as, external wires used in Fukunaga which are easily damaged (see par. [0001] and [0022] of Havlena).

Accordingly, the rejection of claims 56-58 under 35 U.S.C. 103(a) as being unpatentable over Fukunaga in view of Havlena is maintained.

### ***Conclusion***

7. No claims are allowed.
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Wright whose telephone number is 571-272-2374. The examiner can normally be reached on Monday thru Thursday, 9 AM to 6 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 20, 2007

pkw

  
Jill Warden  
Supervisory Patent Examiner  
Technology Center 1700